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LEVELnews

Great Lakes — St. Lawrence River Water Levels

Wet weather in February keeps lake levels high

February was a wet month for all the Great Lakes due to a combination of factors including high precipitation, high runoff from snowmelt, and lower evaporation rates. Outflows from all the lakes were also high, however Lake Ontario had a record high outflow over the month keeping its level only slightly higher than the beginning of March last year. Lakes Erie, Michigan–Huron and Superior all began March well above levels at the same time a year ago. Lake Superior was the closest to record high levels but is only expected to reach record levels if wet conditions continue. The levels in the St. Lawrence River also remained above average during February. All should be prepared for high levels to continue into the summer should the wet conditions continue.

February monthly lake levels

Monthly means for all the lakes were above average by at least 30 cm in February. Lake Superior was 32 cm above its period-of-record (1918–2016) February monthly mean water level and 15 cm higher than February 2017. Lake Superior's monthly February level was the second highest mean level for the month on record and 5 cm below the record high set in 1986. Lake Michigan–Huron's mean level in February was 46 cm above average, 26 cm higher than last February's level

Great Lakes Water Level Information

Lake	February 2018 Monthly Mean Level		Beginning-of-March 2018 Level	
	Compared to Monthly Average (1918–2016)	Compared to One Year Ago	Compared to Beginning-of-Month Average (1918–2016)	Compared to One Year Ago
Superior	32 cm above	15 cm above	34 cm above	16 cm above
Michigan–Huron	46 cm above	26 cm above	51 cm above	26 cm above
St. Clair	54 cm above	10 cm above	76 cm above	30 cm above
Erie	41 cm above	Same	56 cm above	15 cm above
Ontario	30 cm above	8 cm above	34 cm above	4 cm above

Canada

and the highest since 1997. Lake Erie's mean monthly level was 41 cm above average and the same level as the previous February. Lake Ontario's mean monthly February level was 30 cm above average, 8 cm higher than the level last year but was higher at this time of year as recent as 2012.

Lake level changes

The wet February conditions kept all the lakes at higher levels. Lake Superior received the lowest water supplies for February of all the Great Lakes relative to average supplies, however its supplies were still well above average. Lake Superior's lake level dropped 4 cm over the month of February when its average (1918–2016) decline is 5 cm as a result of its wet supplies being offset by higher than average outflow. Lake Michigan–Huron's levels rose 4 cm over February due to wet water supplies when on average it declines 1 cm. The wet supplies in the last half of February on Lake Erie were the main cause for a rise of 21 cm in its levels over the month, seven times its average rise of 3 cm. Lake Ontario received record high water supplies but these were offset by record high outflows resulting in its levels rising 4 cm over February, when on average it rises 2 cm over the month.

Beginning-of-March lake levels

With mild weather and some relatively heavy precipitation in the second half of February, all of the Great Lakes began March at least 34 cm above average (1918–2016) and above last year's levels. Lake Superior's beginning-of-March level was 34 cm above average, 16 cm above the level at this time last year and 4 cm below the record high for this time of year set in 1986. Lake Michigan–Huron's beginning-of-March level was 51 cm above average, 26 cm higher than last year and the highest it has been since 1997. Lake Erie was 56 cm above average at the beginning of March, 15 cm higher than its level this time last year and the highest it has been since 1998. Lake Ontario's level at the start of March was 34 cm above average, 4 cm above this time last year and has been this high as recently as 2012. At the beginning of March, all of the lakes were at least 38 cm above their chart datum level.

Ice conditions on lakes

The beginning of March saw the weekly ice coverage of the Great Lakes at 34%, slightly lower than the average of 39% for this time of year. The cold weather earlier in the winter resulted in a maximum ice coverage on the lakes of 64% in mid-February, well above the maximum average of 41%. With spring and the warmer weather approaching, it is expected that ice coverage will continue to diminish. More information on Great Lakes ice conditions can be found on the Canadian Ice Service web site at: https://www.canada.ca/en/environment-climate-change/services/ice-forecasts-observations/latest-conditions.html.

Water levels forecast

Looking ahead to spring and early summer water levels, it is likely that levels will continue to be well above average based on their

February Precipitation over the Great Lakes*

Great Lakes Basin	**118%**	**Lake Erie (including Lake St. Clair)**	**156%**
Lake Superior	**92%**		
Lake Michigan–Huron	**123%**	**Lake Ontario**	**103%**

February Outflows from the Great Lakes*

Lake Superior	**111%**	**Lake Erie**	**121%**
Lake Michigan–Huron	**128%**	**Lake Ontario**	**133%**

***As a percentage of the long-term February average.**
NOTE: These figures are preliminary.

beginning-of-March levels and past conditions on the lakes (1918–2018). Relative to their beginning-of-March levels and assuming average water supply conditions, all the Great Lakes are expected to rise through March, except for Lake Superior's level that is expected to fall slightly. Everyone around the Great Lakes should be prepared for higher water levels as the lakes begin their seasonal spring level rises, as average spring water supplies are greater than those through the winter months. For a graphical representation of recent and forecasted water levels on the Great Lakes, refer to the Canadian Hydrographic Service's monthly water levels bulletin at: http://tides-marees.gc.ca/C&A/bulletin-eng.html.

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